

Structures, Systems and Whiteheadian Societies: The Quest for Objectivity¹

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Abstract

Systems theory is a laudable attempt to restore a sense of objectivity in the quest for the understanding of physical reality, given the tendency of modern deconstructionism to reduce all points of view to subjective bias. But, insofar as it reduces human subjectivity to a *sine qua non* condition for the operation of an objective system, it too is anti- or post-metaphysical. Xavier Zubiri and Alfred North Whitehead in different ways tried to fashion a new metaphysics which would include human (and divine) subjectivity as a necessary component within an overall structural or process-oriented approach to reality. Zubiri claims that evolution is not only an objective change of structure in physical reality, but also the capacity of the entity to integrate that objective change into its own subjective existence and activity. Each real thing subjectively determines its function within the field even as it contributes to the overall objective structure of the field. For Whitehead too physical reality is both subjective and objective. Actual entities, momentary subjects of experience, by their dynamic interrelation determine the future structure of the field in which they are located, but the field in turn with its already existing structure heavily conditions the way in which they are interrelated. Thus, both Zubiri and Whitehead claim that the *cosmos*, the unity of all things in an overarching world order, is the work of both subjectivity and objectivity in finite imitation of the presence and providential activity of God in the world. .

Resumen

La teoría de sistemas es un loable intento de restaurar el sentido de la objetividad en la búsqueda de la comprensión de la realidad física, dada la tendencia de la deconstrucción moderna para reducir todos los puntos de vista al sesgo subjetivo. Pero, en la medida en que reduce la subjetividad humana a una condición *sine qua non* para el funcionamiento de un sistema objetivo, también es anti-o post-metafísico. Xavier Zubiri y Alfred North Whitehead de diferentes maneras trató de diseñar una nueva visión metafísica que incluiría la subjetividad humana (y divina) como un elemento necesario dentro de un enfoque global o estructural orientada a los procesos de la realidad. Zubiri afirma que la evolución no es sólo un cambio objetivo de la estructura de la realidad física, sino también la capacidad de la entidad para integrar el cambio objetivo en su propia existencia subjetiva y actividad. Cada cosa real subjetivamente determina su función dentro del campo a la vez que contribuye a la estructura objetivo general del campo. También para Whitehead la realidad física es subjetiva y objetiva. Entidades reales, temas momentáneos de experiencia, por su interrelación dinámica determinan la futura estructura del campo en el que se encuentran; pero el campo, a su vez, con su estructura ya existente condiciona fuertemente la forma en que se relacionan entre sí. Así, tanto Zubiri y Whitehead afirman que el cosmos, la unidad de todas las cosas en un orden mundial, es el trabajo de la subjetividad y la objetividad en la imitación finito de la presencia y actividad providencial de Dios en el mundo.

Introduction

In his ground-breaking work *Being and Time*, Martin Heidegger proclaimed the end of classical metaphysics. Since it was based on an unconscious confusion of Being in itself with God as the Supreme Being, classical metaphysics in Heidegger's view lacked real objectivity. For, it never addressed the true reality of Being as that which manifests itself at intervals to *Dasein*, defined as a human being who reflects on the contingency ("thrownness") of her own existence and seeks to achieve intelligibility and order in her life through a self-constituting decision.² Because Heidegger was also critical of the classical notion of substance in terms of traditional subject-object or subject-predicate relations,³ the influence of his thought was clearly felt in still other anti-metaphysical positions such as structuralism, post-structuralism and deconstructionism. But the persistent need for some kind of objectivity in the natural and social sciences eventually led to the development of systems theory in the natural and social sciences. Systems theory focuses on the objective rule-governed context of observable events rather than on the human and non-human agents at work in those contexts. Human subjectivity and other forms of subjectivity within Nature are thereby reduced to being no more than *sine qua non* conditions for the operation of an objective system.⁴ In this sense, systems theory is post-metaphysical, at least in the mind of Niklas Luhmann, one of the principal proponents of systems theory in the late twentieth century. For, it basically eliminates the need for metaphysics as ultimate rational explanation of the way things work within this world.⁵

Even within systems theory, however, interdependence among component parts or members of a system seems to be taken for granted. Admittedly, individual systems operate according to their own internal rules of operation and thus on one level are closed to one another. But there is at the same time operative within sys-

tems theory the phenomenon of structural coupling, "a state in which two systems shape the environment of the other in such a way that both depend on the other for continuing their *autopoiesis* [self-constitution] and increasing their structural complexity".⁶ Living systems (e.g., organisms, above all, those with a central nervous system and a brain) represent the necessary environment for psychic systems like the operation of the human mind; living systems and psychic systems in turn together provide the necessary environment for social systems (communities or various other forms of communication between and among human beings). So perhaps there is a way to incorporate systems theory within the scope of a new world view or metaphysics based on principles of relationality rather than on principles of substantiality, on principles of Becoming as well as on principles of Being.

After all, as Luhmann himself admits in his book *Social Systems* there is need for a general systems theory that would legitimate a systems approach to biology, psychology and sociology.⁷ Such a general systems theory, to be sure, would be oriented to a commonality of method rather than a commonality of content: "general systems theory does not fix the essential features to be found in all systems. Instead, it is formulated in the language of problems and their solutions and at the same time makes clear that there can be different, functionally equivalent solutions for specific problems".⁸ But is there in his notion of "self-referential systems" which critique their own operations as well as the operations of other systems⁹ a blend of contingency and necessity which seems to demand a metaphysical explanation? After all, as Etienne Gilson commented years ago in his book *The Unity of Philosophical Experience*, metaphysics has a way of burying its undertakers.¹⁰

Perhaps the only way to test this claim for the possibility of a new metaphysics of Becoming instead of the classi-

cal metaphysics of Being is to overview the efforts of two twentieth century philosophers who tried in different ways to combine principles of Becoming and principles of Being into their own metaphysical schemes: Xavier Zubiri and Alfred North Whitehead. Both wanted to retain the dynamics of human subjectivity as starting-point for their cosmological systems, but both felt that the classical notion of subjectivity as substance or unchanging substrate for accidental changes, had to be replaced by a new focus on structural continuity and/or process within human experience as the paradigm or prime analogate for how the cosmic process works at all levels of existence and activity within Nature. So, in what follows, I will review some key concepts in the philosophies of Zubiri and Whitehead and compare them both to one another and to the reflections of Niklas Luhmann about general systems theory. The results will inevitably be quite tentative, not really settling any major issues among the three philosophers but only pointing to key differences and unexpected similarities in their overall approach to reality.

A. What is Reality?

The notion of reality plays a major role in Xavier Zubiri's philosophy. For him, reality is what is in its own right (*de suyo*) and essence is its "suchness," the "substantivity" of the entity as a determinate system of constitutive and adventitious characteristics.¹¹ As Alfonso Villa comments in a recent article, there is in Zubiri's philosophy a dynamic interrelation between subjectivity and objectivity in *sentient intellection*, the simultaneous activity of sensing and knowing proper to human beings:

If I put my hand in fire, not only do I feel that "heat warms." I feel that "heat is something warm." There is a content sensed as real in its own right, the *heat*; there is a formality of reality apprehended, *warm*; and finally there is the *is* of the real...Reality-

real-being belong to intellection itself and are the theme of Zubiri's philosophy of intelligence; but they also pertain to the very reality of what is known by intellection, and are the constituents of it, so they are also the theme of Zubiri's philosophy of reality, of a metaphysics.¹²

Zubiri is here removing the artificial distinction between subjectivity and objectivity which arose in Western philosophy as a result of Descartes' turn to the subject (*cogito; ergo, sum*) as the first principle for knowing what is objectively real and therefore certain for human knowledge of self, the world of Nature and God. Reality is common to both the subject of cognition and the object of cognition, albeit in different ways. This seems to be in agreement with what Thomas Aquinas argued in the *Summa Theologica*, I, Q. 85, art. 2, ad 2, that the intellect in act and the thing understood in act are one and the same reality under different formalities, either as an intelligible species for the intellect or as an objective essence for the thing known. But what Aquinas and presumably Zubiri as well seem not to have recognized is that Reality is not simply a fact of experience here and now (something *de suyo*) nor is it just another name for God as Creator of heaven and earth. It might instead be a foundational activity (equivalently Being as a verb or participle rather than a noun) which makes particular things actual or real, each in its own way. That is, much like Creativity in the philosophy of Alfred North Whitehead, Reality would have no entitative status proper to itself, but is actualized, comes into existence, in and through the entities which it empowers to exist.

Perhaps because Zubiri does not always distinguish between what he means by the terms 'Reality,' 'the real,' and 'Being,' his discussion of the role of Reality in his epistemology and his metaphysics seems, in my judgment, to be at times quite ambiguous. Evidence for my argument here is to be found in Zubiri's book *Structures of Reality* where he analyzes

different dynamic structures of reality. Among these structures is to be found what he calls alteration and in particular evolution. "Evolution is not mutation, but just the reverse: it is the capacity for integrating mutation. It is giving of oneself what one is precisely by integrating the mutation."¹³ So evolution is apparently both an objective and a subjective reality at the same time. As a structure it is an entity or objective thing. As a capacity for integrating mutations it is a subjective reality reflecting in its operation a predetermined plan or structure of development for a given entity. Zubiri describes mutations as "positive moments" in the genesis or gradual development of essences: "The positive moment is the one according to which a structure, say that of a determined reptile, has enough vitality to integrate the mutation and survives precisely in the form of a bird".¹⁴ But does a structure possess vitality in and of itself or is this structure rather an objective component in the capacity of a subject to undergo change?

Zubiri and his followers would presumably counter-argue here that reality itself evolves because of "the potentialities of reality that things have by virtue of their particularity".¹⁵ So Reality is not an unchanging essence or Platonic form which is forever both the same as and different from its external manifestations at any given moment. Reality is to be found first and foremost in a particular entity in its own right [*de suyo*] with its inbuilt potentialities.¹⁶ But this line of thought seems to lend itself to something like nominalism: the assertion that things are the way they are because in the end this is the way they are. Yet Zubiri also claims that "evolution relates to reality as such precisely in the form of determining the degrees of reality within it. The degrees of reality are not a series, a kind of scale of realities present in the universe; but they have a strictly dynamic character in which higher or lower forms of reality keep appearing. Both can happen. This is precisely becoming".¹⁷ Yet if reality admits of degrees so that some things are more real than

others, then something other than the things themselves in their particularity here and now would seem to be responsible for the existence of these degrees of reality. If, however, Reality is a foundational activity which achieves actuality only in and through the entities which it empowers to exist, then Reality does admit of degrees of instantiation even as it likewise serves as the underlying ontological principle (*raison d'être*) for change or becoming.

Zubiri also maintains that essences as dynamic principles for the self-constitution of an entity are self-giving.¹⁸ But does this imply a distinction between essence as that which makes an entity to be in its own right [*de suyo*] and essence as that which enables an entity to change into something else altogether? In a later chapter of *The Dynamic Structure of Reality*, for example, Zubiri claims:

Without a doubt, there is a difference to establish between what reality is as a substantive structure and what the structure is as a dynamism. The moment of primary cohesive unity constituting the formal essence and the reality *simpliciter* [without qualification] of all the substantivities that there are in the universe, that moment *in its own right* is not *formaliter* [formally] an active moment or a moment of activity...This does not hinder the notes of that reality from being active by themselves...Dynamism does not behave with respect to essence as a consequence with respect to its principles. Dynamism is nothing but essence giving of itself what it constitutively is.¹⁹

Thus Zubiri does seem to distinguish between essence as the objective structure of an entity's self-constitution and essence as a subjective principle of activity whereby one entity evolves into another entity of a different class or species. In my own view, however, structure as such has to do with objectivity, that which at least for the moment is fixed, rather than with subjectivity, that which is intrinsically dynamic and

thus open to progressive change. Zubiri seems to conflate the two.

In fairness to Zubiri, however, one should realize that in the view of Niklas Luhmann and other systems thinkers structure or system is “autopoietic,” capable of transformation into new forms of self-organization in virtue of its own properties and laws.²⁰ Even though “structural coupling,” as noted above, regularly takes place between separate systems, yet each system is still basically closed to external influences upon its own internal structure and operation. Thus in the thinking of systems theorists like Luhmann as well as in the work of Zubiri, there seems to be too little recognition of the basic difference between subjectivity and objectivity in the workings of Nature. The two notions are, of course, basically interdependent. Subjectivity cannot operate without reliance on objectivity in the form of pre-given structures that condition the mode of operation of subjects and the inevitable limits within which they can properly function. Yet, taken by itself, objectivity is simply a reflection of the *status quo*, the way things are right now. For a new form of objectivity to arise and have its effect on the capacity of existing things to evolve and in this way change form, the potentiality for evolution and change of form must also be present in the form of subjectivity within those same entities. As Teilhard de Chardin pointed out years ago in *The Phenomenon of Man*, there must be an “inside” as well as an “outside” to even the smallest entities such as a grain of sand.²¹ To ignore the need for subjectivity as the capacity for transformation within even a grain of sand is to miss how evolution has worked to produce over time structures of greater and greater objective complexity.

A more positive feature of Zubiri’s cosmological scheme which in my judgment also has affinities with the notion of system in the writings of Niklas Luhmann is his use of field imagery to describe the reality of things as apprehended by human beings in *sentient intellection*. In Part Two of his book *Sentient Intelligence*, Zubiri first defines what he means by

“field” as the “ambit” of reality: namely, the unity of things “insofar as all of them are *actually* in it, and therefore the field *encompasses* them”.²² Thus understood, the notion of field embraces both the way things are humanly perceived and in some sense the way that things are related to one another. From the perspective of the individual perceiver, a field can be subdivided into separate levels: namely, first level (what is for the perceiver the thing or things in the center of the field), background (what things are in the vicinity of this central thing or things for the perceiver), and periphery (what is to be found in the more extended ambit of the thing in question). Every perceptive field, accordingly, is bounded by a horizon “which does not pertain directly to the things apprehended; but it does pertain to them insofar as they are encompassed in my apprehension of them”.²³ Likewise, when something new is introduced into the observer’s perceptive field, the structure of the field changes; there is a change in first level, background and periphery of the perceptive field as a result of the introduction of new things into the field.²⁴

Important for a comparison with systems theory is what he says in the same chapter of *Sentient Intelligence* about the “field of reality,” the field-character of things in relation to one another. The “field of reality” is not constituted by the mere sum of the real things in the field but is the formal or constitutive unity of those things, “a unity which exceeds what each thing is individually”.²⁵ The field, accordingly, is “an opening toward others”²⁶ and expresses the “transcendental” of each moment of reality, “that moment in virtue of which reality is open both to what each thing really is, to its ‘its-own-ness,’ and to what each thing is *qua* moment of the world”.²⁷ “The field as exceeding real things is the field of their transcendental respectivity [intrinsic relation to one another]. In this way, the field is a moment of physical character”.²⁸ It expresses the “supra-individual unity” of all the things in the field, the “ambit” of each and every thing in the field.²⁹ Strictly speaking, the

field is not empty space but spaciousness, that which makes any given space possible. That is, by their respectivity toward one another, real things generate their ambience or field-reality. The field, therefore, is not only more than each real thing but is *in* each real thing as its respectivity or intrinsic relationality toward other things.³⁰

From this starting-point in the field-character of reality, Zubiri proceeds to discuss the structure of the field of reality as “something given in the primordial apprehension of reality”.³¹ That is, “reality, such as it is given to us in impression, has different forms, one of which is the ‘toward’ by which reality inexorably leads us to other realities”.³² Elaborating on this “towardness” as a moment of reality, Zubiri explains:

This means that every thing *by virtue of being real* is in itself of field nature; every real thing constitutes a form of reality ‘toward’ another. . . . This is a structural and formal moment of the field; the field determines the reality of each thing as a reality “among” others. The “among” is grounded in the field nature and not the other way around; it is not the case that there is a field because there are some things situated among others, but rather some things are situated among others only because each and every one of them is in the field. And there is a field precisely and formally because the reality of each thing is formally of field nature. The “among” is not just a conglomeration; nor is it the mere relation of some things with others. Rather, it is a very precise structure, that of the actualization of one thing among others.³³

So nothing is actualized in isolation from others but only in conjunction with them. Yet every real thing in the field is still *de suyo*, something existing in its own right. “Prior to encompassing things, and in order to be able to encompass them, the field includes things in itself. And this inclusion is grounded in the field-nature char-

acteristic of each real thing *qua* real”.³⁴

Yet real things exist not only among others in the field of reality but also as a function of other things: “Each real thing in a field is actualized not just ‘among’ other things but also as a function of them. Position, so to speak, is proper to a thing ‘among’ others, but this is an ‘among’ in which each thing has the position it does as a function of the others and changes as a function of them”.³⁵ For example, “a real thing can change as a function of another real thing which has preceded it; this is pure succession. Succession is a type of functionality. The same must be said of something which is not successive but rather coexistent, namely, when one real thing coexists with another. Coexistence is now functionality”.³⁶ Similarly, real things necessarily exist outside of one another, and this “outside of one another” creates the “spaciousness” of things, their capacity for spatial relations vis-à-vis one another and as a result the functionality of spatial relations in the field of reality. “Functionality, then, is not a relation of some things with others, but it is a structural characteristic of the field itself *qua* field; some things depend upon others because all are included in a field which is intrinsically and formally a functional field. This means that every real thing, by virtue of its moment of field nature-ness, is functional reality”.³⁷ That is, each real thing determines its own function within the field by reason of its field-nature, that whereby it is necessarily included in the field and contributes to the overall structure of the field: “each thing determines the field-nature-ness, and therefore its own functionality. Field-nature reality itself is, *qua* reality, of a functional character”.³⁸

Functionality, however, is not to be confused with causality.³⁹ Causality is only one type of functionality and it is not automatically given with the perception of the real *qua* real. In our sense perception we only infer the existence of causality from the ordered succession of events but we perceive functionality immediately and in every instance “by the way in which

individual things are related to one another, in the way that they exist “toward” or “among” one another.⁴⁰ “Each thing is real in the field among other real things and as a function of them”.⁴¹ To sum up, in every “sentient intellection” in which there is a distinction between self and other, the knower and the thing known, reality is apprehended as an already structured field for the individual real things that either co-exist or succeed one another within the field. “Therefore, the field as a dimension of the actuality of the real is not a moment of the real beyond apprehension; but neither is it a subjective moment. It is a moment of the real as real in sentient intellection”.⁴² Yet here too there seems to be some ambiguity in what Zubiri is saying. Does the field-character of reality pertain to things apart from human cognition or only in conjunction with human sentient intellection of those same things? Zubiri claims that the field-character of reality is not something purely subjective, that is, something that may or may not be present in any given act of cognition, but is something invariably present in every human cognition. But is it then a transcendental structure of the human mind, a phenomenal and strictly epistemological reality? Or is it an ontological structure of the real *qua* real, quite apart from the workings of the human mind? For that matter, what is the nature of Reality apart from human apprehension of the real? Is the source of its alleged self-giving in human *sentient intellection* something beyond our human comprehension?

At this point we are in a position to compare and contrast Zubiri’s metaphysical scheme with the notion of system in the work of Niklas Luhmann. Where Zubiri’s scheme seems to run parallel with Luhmann’s is in the emphasis on structure and function in the “field of reality.” Essence for Zubiri, as noted above, is both the given-ness of an entity, its reality or *de suyo* character here and now, and the structural principle of the substantivity of an entity, its set of dynamically interrelated notes or characteristics as an entity

within the field of reality. The field functions as an organized whole with every real thing in the field having a position and a specific role to play in relation to the other things in the field. This understood, Zubiri’s description of the field of reality roughly corresponds to Luhmann’s notion of an autopoietic self-referential system.⁴³ But, whereas Luhmann thinks of a self-referential system as “one among many, a subsystem of a subsystem of a subsystem of society”,⁴⁴ the notion of the field of reality for Zubiri is unlimited in its scope, altogether different from the perceptual field of the individual human being which is limited by its own finite “ambit” or horizon. Is then the field of reality a transcendent entity akin to the notion of Being, everything that exists? If so, then Zubiri’s emphasis on the field-nature of reality and on substantivity as the intrinsic dynamic structure of physical entities is more closely aligned with the presuppositions of classical metaphysics than with strictly empirical self-referential systems for Luhmann. What Zubiri and Luhmann do have in common, however, is a renewed emphasis on system and function, the “how” of things rather than the “why” of things. Perhaps this is the best that one can do in terms of combining principles of Being and principles of Becoming within a single metaphysical scheme. But let us now see whether a suitably modified version of Whitehead’s cosmological scheme could offer an even better synthesis of principles of Being and principles of Becoming that would be able to incorporate at least some of Luhmann’s general systems theory into its own operational methodology and metaphysical presuppositions.

B. Whiteheadian societies as structured fields of activity

Whitehead, like Zubiri, was of the view that the notion of substance-quality in early modern Western philosophy conceived along the lines of the subject-predicate bifurcation in classical logic was mistaken and should be replaced by some-

thing more dynamic:

Descartes allowed the subject-predicate form of proposition, and the philosophical tradition derived from it, to dictate his subsequent metaphysical development. For his philosophy, 'actuality' meant to be a substance with inhering qualities. For the philosophy of organism [Whitehead's own metaphysics], the percipient occasion is its own standard of actuality. If in its knowledge other actual entities appear, it can only be because they conform to its standard of actuality. There can only be evidence of a world of actual entities, if the immediate actual entity discloses them as essential to its own composition.⁴⁵

For Whitehead, then, "[a]ctual entities"—also termed 'actual occasions'—are the final real things of which the world is made up.⁴⁶ These actual entities are not mini-things (like material atoms) but momentary self-constituting subjects of experience, equivalently spiritual atoms, which "prehend" or internalize all the previous actual entities in their world of experience and incorporate them into their individual self-constitutions here and now in terms of both the feeling-tone or energy of those past actual entities and their patterns of self-constitution. Every new actual entity is, accordingly, a microcosm of its entire past world but one shaped in terms of its own pattern of self-constitution here and now.⁴⁷

Likewise, very much like Zubiri, Whitehead claims that "it is not 'substance' which is permanent, but 'form.' Forms suffer changing relations; actual entities 'perpetually perish' subjectively, but are immortal objectively".⁴⁸ In similar fashion, Zubiri in *On Essence* claimed: "The essence of a living being is a structure. This is the reason why the structure is not an informing substantial form, because its notes co-determine each other mutually and because the structure is not a substance but substantivity".⁴⁹ So substantivity as understood by Zubiri has some analogy to a Whiteheadian actual

entity as a "superject," a completed actual entity with an objective structure, a fixed form or pattern of existence.⁵⁰ But actual entities are strictly momentary events, destined to be superseded by still other actual entities in their own process of self-constitution. So, while the notion of structure or pattern is just as important for Whitehead as for Zubiri, ongoing subjectivity in the form of newly concrescing actual entities is necessary for the perpetuation and transmission of that structure or form into the future. Unlike Zubiri, Whitehead does not believe that essence or structure is itself dynamic. Subjectivity is necessary for the structure inherited from past actual entities to be a factor in the new entity's process of self-realization. But this subjectivity is not that of a single substance, an unchanging thing, but that of an ongoing series of momentary subjects of experience with basically the same pattern or structure of self-constitution.

In *On Essence*, to be sure, Zubiri distinguishes between open and closed essences: "The structure of the closed essence is the principle 'whence' something is a fact; the open human essence is the principle 'whence' something is an event".⁵¹ Closed essences, in other words, actualize fixed potentialities within a material entity. Open essences, specifically the essence proper to fully self-conscious human beings, actualize contingent possibilities that have been consciously "accepted" or "approved".⁵² Certainly, the "eventual" character of an open (human) essence for Zubiri resembles higher-order actual entities for Whitehead which consciously distinguish between possibility and actuality in making their self-constituting decision. Likewise, Zubiri's notion of a closed essence has some resemblance to a lower-order actual entity for Whitehead which simply repeats the pattern of self-constitution proper to its predecessors. But the major difference between Zubiri's and Whitehead's schemes is that the essence or the internal constitution of an entity for Zubiri is a dynamic structure, whereas for Whitehead it is in the first place the subjectivity of an actual

entity and only afterwards a structure or pattern of existence proper to its reality as a “superject,” an objectified subject of experience.

Yet Whitehead may have overplayed the notion of an actual entity as a self-constituting subject of experience and underplayed, failed to develop, the notion of that same actual entity as a “superject,” something objectively “prehensible” by subsequent actual entities, above all, those actual entities in the same “society” or ongoing series of actual entities. Here Zubiri’s notion of “the field of reality” might be quite valuable in rethinking what Whitehead should have meant by “society” as a reality resembling an Aristotelian substance in its continuity and yet quite different from it in its internal constitution.⁵³ Furthermore, such a revised understanding of what Whitehead meant by society might have affinity with what Luhmann says about self-referential systems as the focus of his general systems theory. To make this clear, however, I will first summarize what Luhmann in *Social Systems* says about self-referential systems and their “autopoiesis,” and then explain how a Whiteheadian “society” could be reconceived as a stable structured field of activity for ongoing sets of constituent actual entities and thus as the equivalent of a self-referential system for Luhmann.

In the chapter entitled “System and Function” in his book *Social Systems*, Luhmann begins by noting that, while there are multiple types of real systems to be found in the world, his focus will be on self-referential systems: namely, “systems that have the ability to establish relations with themselves and to differentiate those relations from relations with their environment”.⁵⁴ Instead of employing the conventional distinction between parts and wholes in his analysis of self-referential systems, Luhmann thus distinguishes between systems and their environments with the consequence that relations between and among entities within the system are more important than their individual relations with entities in the

environment. As I will indicate below, such a definition of self-referential systems likewise seems to hold for Whiteheadian “societies” if they be considered as structured fields of activity for their constituent actual entities rather than simply as aggregates of individual actual entities with a similar pattern of self-constitution. Luhmann, to be sure, would be wary of this comparison because for him specifically social systems like those governing communities, organizations and environments are “nonpsychic”.⁵⁵ Their components are “elements” with objective relations to one another in virtue of the structure of the system;⁵⁶ they are not momentary subjects of experience with “internal” relations to one another.⁵⁷ Yet Luhmann also describes social systems as able to distinguish between themselves and their environment:

The theory of self-referential systems maintains that systems can differentiate only by self-reference, which is to say, only insofar as systems refer to themselves (be this to elements of the same system, to operations of the same system, or to the unity of the same system) in constituting their elements and their elemental operations. To make this possible, systems must create and employ a description of themselves; they must be able to use the difference between system and environment within themselves, for orientation and as a principle for creating information.⁵⁸

Yet can a self-referential system make such self-referential decisions without some form of subjectivity for the system as a whole or some kind of intersubjectivity operative between the elements in their objective relations to one another?

Luhmann clearly wants to remain objective in his analysis of the workings of systems. Hence, while in Luhmann’s view the concept of “subject” as used by Immanuel Kant and others should be replaced by the concept of self-referential systems,⁵⁹ the language of subjectivity is still present in his analysis of the workings

of self-referential systems: "A system's internal organization for making selective relations with the help of differentiated boundary mechanisms leads to systems' being indeterminable for one another and to the emergence of new systems (communication systems) to regulate this indeterminability.⁶⁰ Yet how does a system as a purely objective reality make "selective relations with the help of differentiated boundary mechanisms" without any form of internal self-awareness or subjectivity? Luhmann claims: "Selection can no longer be conceived as carried out by a subject, as analogous with action. It is a subject-less event, an operation that is triggered by establishing a difference".⁶¹ But then he adds: "Difference does not determine what must be selected, only that a selection must be made. Above all, the system/environment difference seems to be what obliges the system to force itself, through its own complexity, to make selections".⁶² Here too, the language of subjectivity is present: the objective system/environment difference "obliges the system to force itself...to make selections."

In his book *Luhmann Explained*, Hans Georg Moeller makes clear that Luhmann does not deny the de facto reality of human beings but only affirms that human beings exist on several levels at once (e.g., bodily, mentally, socially) and that these levels as autonomous self-referential systems do not make up an organic whole, a complete human being in the traditional sense.⁶³ Generalizing even further, Moeller argues: for Luhmann "[r]eality is not an all-embracing whole of many parts, it is rather a variety of self-producing systemic realities, each of which forms the environment of all the others. There is no common 'world' in reality, because reality is in each instance an effect of 'individual' systemic autopoiesis".⁶⁴ The term *autopoiesis* Luhmann consciously borrowed from Humberto Maturana and Francisco Varela, two biologists from Chile who applied systems theory to the study of biological reproduction, the way in which living cells are from moment to moment the product of their own internal processes of

reproduction.⁶⁵

Granted the usefulness of general systems theory as a common methodology for objective analysis in various otherwise loosely related scientific disciplines, one may still question whether one is thereby presented with an adequate understanding of human nature and the world of Nature. Moreover, as Moeller comments in *Luhmann Explained*, the latter's understanding of systems theory as a "super-theory":⁶⁶ "does little outside of theory. With supertheory, the world does not become morally better, more rational, or spiritually complete. It only becomes more distinct".⁶⁷ So general systems theory with its passion for objectivity is an excellent tool for growth in knowledge but clearly inadequate for assisting human beings both as individuals and as members of society to live a better human life in greater harmony with the natural world. These latter goals would presumably be better attained by a world view or metaphysics with a starting-point in subjectivity or, even better, intersubjectivity as the basis for moral activity as well as philosophical reflection. Yet such a world view or metaphysics should also aspire to the same levels of objectivity as Luhmann's systems theory. Hence, in the concluding pages of this essay, I will briefly indicate how a Whiteheadian society when understood as a structured field of activity for its constituent actual entities generally corresponds to the need for objectivity in terms of systems theory and yet has its necessary grounding in the ongoing intersubjective relations of its constituent actual entities.

To begin, I repeat Luhmann's definition of self-referential systems, namely, "systems that have the ability to establish relations with themselves and to differentiate these relations from relations to their environments".⁶⁸ In my view, this definition of a self-referential system also seems to fit the notion of a Whiteheadian society when understood as a structured field of activity for its constituent actual entities from moment to moment. Whitehead himself, of course, did not describe a "society" as a structured field of activity. But in his

book *Process and Reality*, he says:

Every society must be considered with its background of a wider environment of actual entities, which also contribute their objectifications to which the members of the society must conform. . . . But this means that the environment, together with the society in question, must form a larger society in respect to some more general characteristics than those defining the society from which we started. Thus we arrive at the principle that every society requires a social background, of which it is itself a part.⁶⁹

One may surmise that the terms “environment” and “field of activity” are basically synonymous. Hence, the environment/field of activity is in each case structured by the patterns of self-organization of its constituent actual entities in their ongoing succession. “Thus in a society, the members can only exist by reason of the laws which dominate the society, and the laws only come into being by reason of the analogous characters of the members of the society”.⁷⁰

Where I differ from Whitehead on this point is that he seems to confuse the objective pattern of organization for the “society”/field of activity as a whole with what can be derived from comparing the individual patterns of self-constitution for each of its constituent actual entities. But this means that the “society”/field of activity has no objective reality, no pattern of organization proper to itself, which is distinct from its parts or members in their dynamic interrelation. It is reductively an aggregate of interrelated individual entities, not an objective, specifically social reality with its own pattern of existence and activity. Thus, for many years now, I have argued that the patterns proper to the self-constitution of individual actual entities are ultimately incorporated into the objective pattern for the field of activity as a whole.⁷¹ In this sense, my understanding of a Whiteheadian society corresponds closely to Luhmann’s understand-

ing of a system and its constitutive “elements”: “Elements are elements only for the system that employs them as units and they are such only through this system. This is formulated in the concept of autopoiesis”.⁷²

That is, just as in Luhmann’s understanding of systems and their elements, in my interpretation of Whiteheadian societies there is clear top-down causality from the objective pattern of organization of the society as a whole upon its constituent actual entities in their individual self-constitution from moment to moment. But whereas Luhmann, given his focus on objectivity, basically ignores the indispensable role of individual elements in the formation of a system’s governing structure, I agree here with Whitehead in his insistence that the source of this governing structure of a “society” comes from the interrelated activity of its constituent actual entities as self-constituting subjects of experience. Thus, whereas Whitehead in his understanding of a society focuses almost exclusively on the efficient causality of constituent actual entities in shaping their “common element of form” as a society,⁷³ and while Luhmann emphasizes the formal causality of the governing structure of the system in organizing its various elements, I choose the middle path in my claim that a Whiteheadian society and a self-referential system for Luhmann should be considered as constituted in equal measure by bottom-up efficient causality and top-down formal causality. In this way, there is a suitable combination of subjectivity and objectivity in producing the functional unity of either a Whiteheadian society or a self-referential system for Luhmann.

Still another feature of self-referential systems for Luhmann is to found in his notion of system differentiation: “System differentiation is nothing more than the repetition of system formation within systems. Further system/environment differences can be differentiated within systems. The entire system then acquires the function of an ‘internal environment’ for these subsystems, indeed for each subsystem in

its own specific way".⁷⁴ This can be usefully compared with Whitehead's notion of a "structured society," a society "which includes subordinate societies and nexuses with a definite pattern of structural interrelations. . . . A structured society as a whole provides a favorable environment for the subordinate societies which it harbours within itself. Also the whole society must be set in a wider environment permissive of its continuance".⁷⁵ Luhmann's notion of system differentiation and Whitehead's understanding of "structured societies," however, are brought into even closer conceptual alignment if one thinks of Whiteheadian societies and Luhmann's self-referential systems in terms of structured fields of activity for their constituent elements or constituent actual entities. A common field-metaphor, in other words, can unexpectedly bring together Whitehead's notion of "structured society," a society of subsocieties, and Luhman's concept of systems within systems. Reality, in other words, is made up of fields within fields. Yet each field or system possesses its own internal unity and thus has an individual identity by reason of the structural principles proper to itself even as it contributes to the structure of fields of activity or systems more comprehensive than itself.

What is to be said, however, about an ultimate or inclusive field of activity? For Whitehead, this ultimate field of activity would seem to best correspond to the consequent nature of God, God's ongoing experience of the world as a whole in which "[t]he revolts of destructive evil are dismissed into their triviality of merely individual facts, and yet the good they did achieve in individual joy, in individual sorrow, in the introduction of needed contrast, is yet saved by its relation to the completed whole".⁷⁶ For me, as one who

believes in the Christian doctrine of the Trinity, the ultimate and all-inclusive field of activity is the Kingdom of God, the participation of all creaturely actual entities and the societies to which they belong in the divine field of activity, the communitarian life of the three divine persons.⁷⁷ But, as Moeller points out in *Luhmann explained*, for Luhmann the global society is not synonymous with a harmonious whole:

Global society is a complex multiplicity of subsystems, which are not integrated into an overarching global unity. Function systems [e.g., the natural and social sciences, economics, international politics] operate beyond geographical borders; in this sense they are universal. There is no geographical space where they cannot go, but at the same time they are all functionally particular. They are bound by their function, not by space. Global society consists of a plurality of systems that are both universal and particular.⁷⁸

So in the end Luhmann as a purely secular thinker with strong affinities for postmodernism and French deconstructionism stands apart from Xavier Zubiri, Alfred North Whitehead and myself. All three of us are metaphysicians with strong beliefs in the classical notion of *cosmos*, the unity of all things in an overarching world order dominated by belief in a transcendent God. Likewise, even though all three of us share with Luhmann an evolutionary approach to reality, we disagree that a functional systems-oriented approach to reality can more or less dispense with human subjectivity as necessary starting-point for explanation of how evolution works in the world of Nature.

Notes

- ¹ The text of this article is also being published in Spanish in the journal HUMANITAS, Año 40, Núm 40, Vol. 1, Enero-Diciembre 2013. This journal is from the Centro de Estudios Humanísticos, Universidad Autónoma de Nuevo León, México.
- ² Heidegger, Martin, *Being and Time*. Translated by John Macquarrie and Edward Robinson. New York: Harper & Row. 1962, pp. 67-77, 312-315.
- ³ *Ibid.*, pp. 71-75.
- ⁴ Moeller, Hans-Georg, *Luhmann Explained: From Souls to System*, Chicago: Open Court, 2006, p. 8.
- ⁵ *Ibid.*, pp. 3-21.
- ⁶ *Ibid.*, p. 19.
- ⁷ Luhmann, Niklas, *Social Systems*. Translated by John Bednarz, Jr., with Dirk Baecker, Stanford: Stanford University Press, 1995, pp. 12-16.
- ⁸ *Ibid.*, p. 15.
- ⁹ *Ibid.*, pp. 487-488.
- ¹⁰ Gilson, Etienne, *The Unity of Philosophical Experience*, Westminster, MD: Four Courts Press, 1982, p. 306.
- ¹¹ Zubiri, Xavier, *On Essence*. Translation and Introduction by A. Robert Caponigri. Washington, D.C.: The Catholic University of America, 1980, pp. 408-429.
- ¹² Villa, Alfonso. "Xavier Zubiri: First Philosophy of the Real," *Theoforum* 40 (2009), pp. 36-37.
- ¹³ Zubiri, Xavier. *Sentient Intelligence*. Translated by Thomas B. Fowler. Washington, D.C.: The Xavier Zubiri Foundation of North America, 1999, p. 96.
- ¹⁴ Zubiri, Xavier. *Dynamic Structure of Reality*. Translated by Neson R. Orringer. Chicago: University of Illinois Press, p. 98.
- ¹⁵ *Ibid.*
- ¹⁶ *Ibid.*
- ¹⁷ *Ibid.*
- ¹⁸ Zubiri, *Dyanamic Structure*, p. 97, 207.
- ¹⁹ Zubiri, *Dyanamic Structure*, p. 207.
- ²⁰ Luhmann, *op. cit.*, p. 34.
- ²¹ Teilhard de Chardin. *The Phenomenon of Man*. Translated by Bernard Wall. New York; Harper & Row, 1965, p. 59.
- ²² Zubiri, *Sentient Intelligence*, *op. cit.*, p. 22.
- ²³ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 23.
- ²⁴ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 24.
- ²⁵ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 28.
- ²⁶ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 28.
- ²⁷ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 29.
- ²⁸ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 29.
- ²⁹ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 29-30.
- ³⁰ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 31.
- ³¹ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 33)
- ³² Zubiri, *Sentient Intelligence*, *op. cit.*, p. 33.
- ³³ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 34.
- ³⁴ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 35.
- ³⁵ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 36.
- ³⁶ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 36-37.
- ³⁷ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 38.
- ³⁸ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 38.
- ³⁹ Fowler, Thomas B. "Zubiri and Science," *Theoforum* 40, 2009, p. 110-114.
- ⁴⁰ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 40-41.
- ⁴¹ Zubiri, *Sentient Intelligence*, *op. cit.*, p. 42.
- ⁴² Zubiri, *Sentient Intelligence*, *op. cit.*, p. 42.
- ⁴³ Luhmann, *op. cit.*, p. 483-488.
- ⁴⁴ Luhmann, *op. cit.*, p. 487.
- ⁴⁵ Whitehead, Alfred North. *Process and Reality*. Corrected Edition. Edited by David Ray Griffin and Donald W. Sherburne. New York: Free Press, 1978, p. 145.
- ⁴⁶ *Ibid.*, p. 18.
- ⁴⁷ *Ibid.*, p. 47-48.
- ⁴⁸ *Ibid.*, p. 29.
- ⁴⁹ Zubiri, *On Essence*, *op. cit.*, p. 454.
- ⁵⁰ Whitehead, *op. cit.*, p. 28.
- ⁵¹ Zubiri, *On Essence*, *op. cit.*, p. 457.
- ⁵² Zubiri, *On Essence*, *op. cit.*, p. 456.
- ⁵³ Whitehead, *op. cit.*, p. 204.
- ⁵⁴ Luhmann, *op. cit.*, p. 13.
- ⁵⁵ Luhmann, *op. cit.*, p. 14.
- ⁵⁶ Luhmann, *op. cit.*, p. 20-23.
- ⁵⁷ Whitehead, *op. cit.*, p. 58-59.
- ⁵⁸ Luhmann, *op. cit.*, p. 9.
- ⁵⁹ Luhmann, *op. cit.*, p. 28.

⁶⁰ Luhmann, *op. cit.*, p. 29.

⁶¹ Luhmann, *op. cit.*, p. 32.

⁶² Luhmann, *op. cit.*, p. 32.

⁶³ Moeller, *op. cit.*, p. 10.

⁶⁴ Moeller, *op. cit.*, p. 14.

⁶⁵ Moeller, *op. cit.*, p. 12-13.

⁶⁶ Luhmann, *op. cit.*, p. 4-5.

⁶⁷ Moeller, *op. cit.*, p. 201.

⁶⁸ Luhmann, *op. cit.*, p. 13.

⁶⁹ Whitehead 1978, 90.

⁷⁰ Whitehead 1978, 91.

⁷¹ See, e.g., Bracken, *Society and Spirit: A Trinitarian Cosmology* (Selinsgrove, PA: Susquehanna University Press, 1991), 43-49; *The Divine Matrix: Creativity as Link between East and West* (Maryknoll, NY: Orbis, 1995-1996), 60-61; *The One in the Many; A Contemporary Reconstruction of the God-World*

Relationship (Grand Rapids, MI: Eerdmans, 2001), 134-135; *Subjectivity, Objectivity and Intersubjectivity: A New Paradigm for Religion and Science* (West Conshohocken, PA: Templeton Foundation Press, 2009), 133-134; *Does God Roll Dice?: Divine Providence for a World in the Making* (Collegeville, MN: Liturgical Press, 2012).

⁷² Luhmann, *op. cit.*, p. 22.

⁷³ Whitehead 1978, 34.

⁷⁴ Luhmann, *op. cit.*, p. 18.

⁷⁵ Whitehead 1978, 99.

⁷⁶ Whitehead 1978, 346.

⁷⁷ Bracken, Joseph A. *Christianity and Process Thought: Spirituality for a Changing World*. Philadelphia: Templeton Foundation Press, 2006, pp. 8-10, 53-56.

⁷⁸ Moeller, *op. cit.*, p. 54.